

Amendments to the Specification:

Please replace the first full paragraph on page 4 with the following amended paragraph:

These ~~feature~~ features each has advantages including a low-bit-rate hybrid coder using the voicing of weakly-voiced frames to enhance the waveform coder and avoiding phase discontinuities at the switching between parametric and waveform coded frames.

Please replace the last paragraph on page 6 with the following amended paragraph:

Analysis by Synthesis 114 is used by the CELP coder for weakly-voiced frames to encode the pitch, pitch-predictor gain, fixed-codebook contribution, and codebook gain. The initial pitch estimate is obtained from the pitch-and-voicing analysis. The fixed codebook is a sparse codebook with four pulses per 10 ms (80-sample) sub-frame. The pitch-predictor gain and the fixed excitation gain are quantized jointly by Quantization 112 110.

Please replace the fifth paragraph on page 7 with the following amended paragraph:

Postfilter 144 with coefficients derived from LP parameters provides ...
enhanced formant peaks.

Please replace the first paragraph on page 12 with the following amended paragraph:

The $\{X[k]\}$ may be estimated by applying a discrete Fourier transform to the samples of a single period (or small number of periods) of $e(n)$ as in Figures 3b-3c 2a-2b. The preferred embodiment only uses the magnitudes of the Fourier coefficients, although the phases could also be used. Because the LP residual components $\{e(n)\}$ are real, the discrete Fourier transform coefficients $\{X(k)\}$ are conjugate symmetric: $X(k) = X^*(N-k)$ for an N-point discrete Fourier transform. Thus only half of the $\{X(k)\}$ need be used for magnitude considerations. Of course, with a pitch period of p samples, N will be an integer equal to $[p]$ or $[p]+1$.

Please replace the first paragraph on page 12 with the following amended paragraph:

(2) apply speech activity detection to each of the ~~six~~ eight 20-sample sub-frames of the frame; the speech activity detection may be by the sum of squares of samples with a threshold.

Please replace paragraph (12) on page 15 with the following amended paragraph:

(12) pick the pitch candidate as follows (compare Figure 3): if $pcorr[0]$ is less than $4 * \text{threshold}$, then put $i = -1$; if $pcorr[0]$ is at least $4 * \text{threshold}$, then $i = 0$ unless $pcorr[k]$ is at least $0.8 * pcorr[0]$, then take $i = \text{the largest such } k$ unless additionally $pcorr[k]$ is less than $0.9 * pcorr[0]$ in which case take $i = -1$.